Essay Transsexual athletes—when is competition fair?

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With the elimination of genetic-based testing to verify gender there remains no controversy with respect to athletic competition by phenotypic females with Y chromosomal material, or by individuals who have undergone prepubertal gender reassignment. The former are generally individuals with androgen insensitivity syndrome, whereas the latter comprise cases of sexual ambiguity caused by various rare genetic defects. In neither group can exposure to male sex hormones be argued to have any competitive advantage. Sports authorities are now attempting to establish when and if individuals who have undergone postpubertal gender reassignment, predominantly male-to-female transsexuals and often with legal recognition, can compete in their reassigned gender.

Although there have been anecdotal reports of prominent athletes with proven or suspected genetic intersex disorders, only recently have some transsexual athletes begun to compete successfully in national and international events and many others are presumed to compete at lower levels. Perhaps the most famous of these is Renee Richards, nee Richard Raskin, a physician and competitive amateur tennis player who underwent sex conversion at age 41 years. Richards successfully sued the US Tennis Association to compete in the 1977 US Open Tennis Championships. She subsequently had a modestly successful tennis career—predominantly in women's doubles—and on one occasion reached the finals of the US Open.

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In 1990, when the question of postpubertal transgendered athletes was first considered at the Workshop on Methods of Femininity Verification convened by the International Association of Athletic Federations (IAAF) in Monaco, the issue was discussed only in passing with a recommendation that the relevant sports authority assess individuals on a case-by-case basis. Adopted by the IAAF and the International Olympic Committee, this recommendation provided a framework for the next 15 years. With increasing recognition of gender dysphoria as a specific diagnosis, adoption of protocols for treatment via surgery and hormonal therapy, and an increasing number of transsexual athletes seeking to compete, however, the International Olympic Committee's Medical Commission sought further opinion.

Accordingly, an expert panel was convened in Stockholm, Sweden, in October, 2003, to review the 1990 guidelines in the context of the recent change in gender verification procedures—namely, the cessation of laboratory-based genetic screening of female athletes—and available medical and scientific knowledge. We participated in that meeting, at which were developed recommendations adopted by the International Olympic Committee's Executive Board on May 17, 2004. The recommendations were applicable only to competition in events sanctioned by the International Olympic Committee and are not binding on other international sports governing bodies, and certainly not on the entire panoply of sporting events from local to international in scope. Nevertheless, our purpose was to define more explicit criteria, based on the available evidence, on which the suitability of individuals to compete could be based.

Although there is much published work and recommendations on clinical treatment of transsexual individuals, both male-to-female and female-to-male, there are little data relevant to the effects on athletic performance. Clinically, there is general acceptance of the protocol promulgated by the Harry Benjamin International Gender Dysphoria Association of careful assessment by an appropriate mental-health professional, gender-specific hormonal therapy, a so-called real-life experience in the reassigned gender of at least 12 months, genital reconstructive surgery, and appropriate post-surgery hormonal therapy. Variation

between treatment centres relates to dose, route of administration, and choice of preparation of post-surgery oestrogen replacement in male-to-female transsexuals. The Amsterdam group headed by Louis Gooren has reported that, after 1 year of cross-sexual therapy with androgen deprivation and oestrogen replacement, there was a significant decline in cross-sectional thigh muscle mass in male-to-female transsexuals with the mean muscle area approaching that of pretreatment female-to-male transsexuals. Still, after 1 year of therapy, male-to-female muscle mass remained greater than that observed in the comparison female-to-male group before treatment (though not after testosterone therapy). Although not necessarily correlated with athletic performance, these effects peaked after 1 year of administration. Gooren's group has also shown that hormone therapy increases subcutaneous fat deposits in a feminine distribution and decreases haemoglobin concentrations.

The International Olympic Committee approved the expert panel's recommendation that postpubertal transsexual individuals, both male-to-female and female-to-male, be eligible to compete under the criteria shown in the panel below. Based on the scientific data available, the expert panel recommended that eligibility should begin no sooner than 2 years after gonadectomy. Although these criteria have been widely disseminated in the lay and sports press, not often appreciated is the fact that the recommendations included the caveat that every individual would be assessed on a case-by-case basis and in confidence and that in the event that the gender of a competing athlete was questioned, the medical delegate or equivalent of the relevant sporting body would have authority to take all appropriate measures to ascertain the gender of that competitor. Indeed these are the precise criteria put in place after genetic-based laboratory screening of female athletes was discontinued by the International Olympic Committee.

Panel: **International Olympic Committee criteria for eligibility for transexual athletes**

- Surgical anatomical changes completed, including external genitalia changes and gonadectomy
- Legal recognition of their assigned sex has been conferred by appropriate official authorities
- Hormonal therapy appropriate for assigned sex has been administered in a verifiable manner and for a sufficient length of time to reduce to a minimum gender-related advantages in sport competitions

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Ultimately, the number of transsexual athletes who can successfully compete in open international events is likely to be small, in accord with the estimated incidence of gender dysphoria of one in about every 12 000 men and one in about every 30 000 women. Furthermore, the recommended process for gender reassignment as described is rather arduous. Finally, individuals who fulfil these criteria will likely be at a relatively advanced age athletically, at least in many sports, though there are notable exceptions—eg, in golf, such as Mianne Bagger who recently qualified and has been competing on the Ladies European Tour after competing in the Swedish Telia Tour in 2004. Inevitably there will be transgendered athletes, such as Renee Richards, who will be competitive at a high level, but most will probably wish to compete only at a masters level or at local and regional events. The recommendations of the International Olympic Committee are being adopted by various sports governing bodies, such as the US Golf Association and Great Britain's Ladies Golf Union. We believe that they provide a fair and equitable standard.

Further reading

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